

**UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT  
OF NORTH CAROLINA**

**CHESTER BAILEY, individually  
and on behalf of all others similarly  
situated,**

**Plaintiff,**

**v.**

**NVIDIA CORPORATION,**

**Defendant.**

**Case No.: 3:15-cv-00119**

**DEMAND FOR JURY TRIAL**

**CLASS ACTION COMPLAINT**

Plaintiff Chester Bailey (“Plaintiff”), by and through undersigned counsel, on behalf of himself and all other persons similarly situated, allege against Defendant NVIDIA Corporation (“NVIDIA” or “Defendant”) the following facts and claims, upon personal knowledge as to matter relating to himself and upon information and belief as to all other matters, which all other allegations are likely to have evidentiary support after reasonable opportunity for further investigation and discovery and, by way of this Class Action Complaint, aver as follows:

**SUMMARY OF THE ACTION**

1. This is a nationwide class action on behalf of all consumers who purchased graphics and video cards incorporating the NVIDIA GeForce GTX 970 graphics processing units (“GTX 970”). The GTX 970 was sold to consumers based on false and misleading representations that it operates with a 4 gigabyte (“GB”) pool of video random access memory (“VRAM”), 64 Raster Operations Pipelines (“ROP”), and 2048 kilobytes (“KB”) of L2 cache capacity.

2. In actuality, (i) the VRAM in the GTX 970 is divided into two separate pools of memory, with one high performance pool of 3.5GB VRAM, and a second nearly unusable pool of 0.5GB VRAM; (ii) the GTX 970 contains only 56 ROP; and (iii) the GTX 970 only has 1792KB of L2 cache capacity.

3. NVIDIA deceived consumers by misrepresenting the specifications, characteristics, qualities, and capabilities of the GTX 970 through advertising and marketing. Plaintiff and consumers were aware of and relied upon these representations at the time of purchase and NVIDIA's misrepresentations instilled a perception in consumers that the product would, in fact, conform to the advertised and marketed specifications, characteristics, qualities, and capabilities. Deceived consumers have mobilized en masse over their purchase of the GTX 970, which does not conform to the specifications and capabilities advertised by NVIDIA. As of the filing of this Complaint, a petition seeking refunds for the GTX 970 has garnered over 10,000 signatures.<sup>1</sup>

4. NVIDIA was aware that it was advertising and disseminating false information about the GTX 970's specifications, characteristics, qualities, and capabilities. NVIDIA intentionally withheld the actual specifications and capabilities from consumers, which were only discovered after consumers noticed performance issues with the GTX 970. After consumers discovered that the GTX 970 does not contain the specifications that NVIDIA said it had, NVIDIA's Senior VP of GPU Engineering, Jonah Alben, disclosed that the GTX 970 does not possess the advertised and marketed specifications, characteristics, qualities, and capabilities.<sup>2</sup> Less than a month later, NVIDIA's CEO acknowledged that the specifications disseminated to the public differ from the GTX 970's actual specifications. Plaintiff and the Class purchased the

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<sup>1</sup> <https://www.change.org/p/nvidia-refund-for-gtx-970>

<sup>2</sup> <http://www.pcper.com/reviews/graphics-cards/nvidia-discloses-full-memory-structure-and-limitations-gtx-970>

GTX 970 at a premium price based upon NVIDIA's misleading statements as to the GTX 970's specifications, characteristics, qualities, and capabilities. As a result, Plaintiff and the putative Class and sub-class suffered injuries.

### **JURISDICTION AND VENUE**

5. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1332(d)(2) and the Class Action Fairness Act, in that (i) there is diversity (members of the National Class are citizens of a State different from Defendant), (ii) the amount in controversy exceeds \$5,000,000 exclusive of interests and costs, and (iii) there are 100 or more members in the proposed National Class and in the proposed North Carolina Sub-Class. This Court also has subject matter jurisdiction pursuant to 28 U.S.C. § 1332(a) because the amount in controversy exceeds \$75,000 and the lawsuit is between citizens of different states.

6. Venue is proper in this District pursuant to 28 U.S.C. § 1391 because NVIDIA is subject to personal jurisdiction due to the fact that it transacts business in this Judicial District and resides here for venue purposes. Also, a substantial part of the events or omissions giving rise to Plaintiff's claims occurred in this Judicial District.

### **THE PARTIES**

7. Plaintiff Chester Bailey is a citizen of North Carolina and resides at 6005 Ansley Falls Drive, Charlotte, North Carolina, 28217. On October 16, 2014, Plaintiff purchased an EVGA GeForce GTX 970 4GB DDR5 graphics card at a cost of \$374.70.

8. NVIDIA Corporation is a Delaware corporation with a principal place of business in Santa Clara, California. NVIDIA is a visual computing company and is engaged in the business of designing, manufacturing, selling, and distributing computing equipment, including the GTX 970. The company's products are used in gaming, design and visualization, high

performance computing, data center, and automotive and smart device markets. NVIDIA sells its products, including the GTX 970 to equipment manufacturers, original design manufacturers, system builders, motherboard manufacturers, and add-in board manufacturers across the United States, including North Carolina.

## **FACTS**

9. NVIDIA developed, designed, manufactured, marketed, and sold the GTX 970 to consumers across the United States. The GTX 970 was made widely available to consumers in September 2014, at costs that range between \$330 to \$500. Upon information and belief, NVIDIA has sold the GTX 970 to tens of thousands of consumers nationwide including thousands of consumers in the state of North Carolina.

10. Since that time, NVIDIA has sold and continues to sell the GTX 970 under a marketing scheme that disseminates information about the GTX 970, which is misleading because the characteristics, qualities, and capabilities of the GTX 970 do not conform to NVIDIA's representations. Through direct sales channels and retailers, NVIDIA makes material representations to market GTX 970 devices including (See Figure 1 and 2):

- a. "Standard Memory Config." is "4GB."<sup>3</sup>
- b. "Memory Interface" is "GDDR5."<sup>4</sup>
- c. "ROP" of "64".<sup>5</sup>
- d. "L2 Cache" of "2MB".<sup>6</sup>

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<sup>3</sup> <http://www.geforce.com/hardware/desktop-gpus/geforce-gtx-970/specifications>

<sup>4</sup> *Id.*

<sup>5</sup> <http://www.anandtech.com/show/8935/geforce-gtx-970-correcting-the-specs-exploring-memory-allocation>

<sup>6</sup> *Id.*

## GEFORCE GTX 970 SPECIFICATIONS *(based on base clock)*

Graphics Processing Clusters	4
Streaming Multiprocessors	13
CUDA Cores	1664
Texture Units	104
ROP Units	64
Base Clock	1050 MHz
Boost Clock	1178 MHz
Memory Clock (Data rate)	7000 MHz
L2 Cache Size	2048K
Total Video Memory	4096MB GDDR5
Memory Interface	256-bit
Total Memory Bandwidth	224 GB/s

GTX 970 Reviewer's Guide: Specifications

(Figure 2)<sup>7</sup>

- e. The product packaging for the EVGA GeForce GTX 970 4GB DDR5 graphics card represents that the product is a “4GB GDDR5” device. See Exhibit A incorporated here by reference and attached hereto.

11. Despite the representations proffered by NVIDIA, the GTX 970 does not actually conform nor perform to these specifications during actual use.

12. NVIDIA withheld the true specifications of the GTX 970 from consumers, including Plaintiff, despite having access, actual knowledge, and exclusive possession of information that contradicted the marketed and represented specifications. In tandem with its affirmative statements to the contrary, NVIDIA’s material omission that the GTX 970 does not actually perform as represented, would be likely to, and did, mislead reasonable consumers, specifically those within NVIDIA’s target market for this product.

13. In the PC gaming world, whether for entertainment or educational purposes, consumers of high end graphics processing units (“GPUs”) like the GTX 970 make purchasing

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<sup>7</sup> *Id.*

decisions based on a product's hardware specifications for which consumers rely heavily on a manufacturer's own marketing, advertisements, and sales presentations, as well on product reviews produced by professional product reviewers ("PPR").<sup>8</sup> NVIDIA knows that its customers rely on information published by PPRs, so it sends new or soon to be released products, along with a "Reviewer's Guide" to PPRs, free of charge, with the understanding that a PPR will review the product, often in video form, and post a copy of the review online for the PPR's subscribers (and the public) to view. NVIDIA knows that its customers rely on the articles and product reviews published by PPRs and the press. Even on its own website, NVIDIA provides links to product review pages published and maintained by PPRs.<sup>9</sup> The "Reviewer's Guide" NVIDIA sends to PPRs contains product information including *inter alia*, features, specifications, and installation tips.<sup>10</sup> Because NVIDIA's claims were included in advertisements, marketing, and sales presentations, including a "Reviewer's Guide", reasonable consumers of the GTX 970 would likely be misled into believing the GTX 970 functioned using a full pool of 4GB VRAM, 64 ROP, and 2048 KB of L2 cache, when in fact it did not. And NVIDIA's misrepresentations and omissions alleged herein are of the type that would be material to a significant number of purchasers of the GTX 970.

14. NVIDIA also advertises and promotes the publications by PPRs on its own website in order to bolster sales of the GTX 970.<sup>11</sup>

15. Due to NVIDIA's deceptive marketing scheme, Plaintiff and Class Members were exposed to its misleading representations and purchased GPUs containing the GTX 970 under

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<sup>8</sup> See e.g., LinusTechTips. "ASUS Strix GeForce GTX 970 Video Card." *YouTube*. N.p., 22 Sept. 2014. Web. 26 Feb. 2015. <https://www.youtube.com/watch?v=Eqz4tDM6W18> (over 480,000 views); *see also* JayzTwoCents. "Gigabyte GTX970 G1 Gaming Super Overclock Windforce Edition." *YouTube*. N.p., 19 Sept. 2014. Web. 26 Feb. 2015. (over 280,000 views).

<sup>9</sup> <http://www.geforce.com/hardware/desktop-gpus/geforce-gtx-970/reviews>

<sup>10</sup> See Figure 2.

<sup>11</sup> <http://www.geforce.com/hardware/desktop-gpus/geforce-gtx-970/reviews>

the false belief that it would function in accordance with their reasonable expectations, which they held based upon NVIDIA's marketing (including that published by PPRs). Accordingly, NVIDIA's misleading claims were a substantial factor in the decisions of Plaintiff and Class Members to purchase the GTX 970.

16. On two separate occasions, NVIDIA has admitted that the GTX 970 doesn't conform to NVIDIA's own marketing or the reasonable expectations of a typical purchaser of the product.

17. On January 25, 2015, NVIDIA's Senior VP of Hardware Engineering, Jonah Alben, disclosed that although the GTX 970 technically contains 4GB of VRAM, only 3.5GB perform as advertised, while the final 0.5GB of operates at a much slower rate. As a consequence of this misrepresentation, when the GTX 970 needs to access the final .5GB of VRAM, the application being run slows down dramatically and in effect becomes unusable. Alben admitted that NVIDIA "screwed up" the representations of the GTX 970's specifications within the Reviewer's Guide.

18. Alben also admitted that the GTX 970 only contains 56 ROP and not the advertised 64 ROP. Similarly, he admitted the L2 cache was only 1792 KB, 12.5% less than the advertised 2048 KB.

19. On February 24, 2015, NVIDIA's CEO, Jen-Hsun Huang confirmed Alben's statements in a press release of his own, where he, in effect confirmed the facts alleged in this Complaint.<sup>12</sup> Specifically, that even though the GTX 970 is advertised as "a 4GB card[,]" the "upper 512MB ... is segmented and has reduced bandwidth." He further admitted that "[NVIDIA] failed to communicate this internally to our marketing team, and externally to reviewers at launch."

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<sup>12</sup> <http://blogs.nvidia.com/blog/2015/02/24/gtx-970/>

20. Even in light of these admissions, NVIDIA continues to market and sell the GTX 970 using the same deceptive and misleading statements it has published all along.

21. When a computer operation, in most instances a computer game, demands access to VRAM beyond 3.5GB, the GTX 970 will utilize the slower 0.5GB of the total 4GB of VRAM. While rate of access to the initial 3.5GB of VRAM is 224GB/s, the rate of access to the 0.5GB portion of the VRAM is a mere 24GB/s. The slower rate of access into the final 0.5GB is averaged across the GTX 970's overall performance speed, resulting in a speed reduction. As a result, Plaintiff and Class members experience a drastic reduction in Frames Per Second ("FPS") rendered in the application or game that they are utilizing. To the many owners of the GTX 970, this is much more than a de minimus speed reduction. From a practical standpoint, this slow down causes the visuals of a computer application to, stutter, chop, and distort, in effect making the application or game unusable when accessing VRAM beyond the initial 3.5GB.

22. NVIDIA also claims that the GTX 970 is designed and capable of performing in 4K (a High Definition Standard above that of 1920x1080, also known as 1080p HD), when in fact it cannot. And even if the GTX 970 can technically reach a threshold to be classified as 4K, it is incapable of performing at a level that would meet the expectations of a reasonable consumer of this type of product, in part, due to the chip architecture and herein described sputtering, chopping, and distorting. NVIDIA boasts:

To date, only GeForce GTX graphics cards are capable of smoothly rendering action at 4K in multi-GPU configurations, a fact pattern proven by the FCAT Frame Capture Analysis Tool, which has been adopted by leading press sites keen to show their readers exactly how a GPU performs, and whether the rendered action is smooth and stutter free.<sup>13</sup>

4K revolutionizes the way you view your games by adding four times as many pixels as commonly used in 1920x1080 screens,

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<sup>13</sup> <http://www.geforce.com/hardware/technology/4k/technology>

opening your eyes to rich, superbly-detailed worlds. If you have a high-end GeForce GTX PC, you're ready for the revolution. Just plug and play and you'll immediately receive a flawless, jaw-dropping experience.<sup>14</sup>

23. That the GTX 970 cannot perform as advertised affects the reasonable expectations of the typical purchaser, including Plaintiff and Class Members because it is not a "future proof" card as expected. Due to the fragmented nature of the GTX 970's chip architecture and its resulting non-conforming performance when compared to other GPUs that utilize a single pool of 4GB of VRAM (a true 4GB), the GTX 970 is incapable of outputting 4K resolution without the above mentioned performance problems, including stuttering, chopping, or distorting. Therefore, Plaintiffs and Class Members will be required to purchase a new GPU in order to meet this quickly adopting standard, despite having already been deceived by NVIDIA into believing that the GTX 970 was capable to perform flawlessly at the 4K level.

24. Plaintiff and Class members purchased the GTX 970 to achieve a high resolution gaming experience, which they reasonably believed was possible upon reading and relying upon on NVIDIA's misleading representations. Instead, Plaintiff and Class members were deceived because the GTX 970 is incapable of delivering the 4K gaming experience it promised, and if it is technically capable, it is incapable of doing so without the above mentioned performance problems, including sputtering, chopping, or distorting.

25. In sum, Plaintiff and Class Members were deceived by NVIDIA's misleading advertising and representations of the specifications, characteristics, qualities, and capabilities of the GTX 970, and purchased a product did not conform to the proffered representations, and have been injured by NVIDIA's unlawful conduct.

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<sup>14</sup> <http://www.geforce.com/hardware/technology/4k>

## **PLAINTIFF'S EXPERIENCE WITH THE GTX 970**

26. Plaintiff was in the market for a new graphics card that would be capable of handling the ever increasing minimum hardware requirements that today's gaming software requires to ensure optimal performance. One of the graphics cards that Plaintiff considered purchasing was the GTX 970. In October, 2014, during his search, Plaintiff read articles<sup>15</sup> and watched numerous product review videos on the Internet that discussed the GTX 970's specifications and repeated those found in NVIDIA's "Reviewer's Guide." Plaintiff also visited and navigated around NVIDIA's own website to learn more about the GTX 970's specifications and capabilities. In reliance on the articles, videos, and NVIDIA's own website, Plaintiff decided that the GTX 970 met his requirements.

27. On October 16, 2014, Plaintiff purchased an EVGA GeForce GTX 970 4GB DDR5 graphics card at a cost of \$374.70. Plaintiff purchased the GTX 970, in part because he thought it would provide a graphical experience that utilized the entire 4GB of VRAM. Soon after, on December 12, 2014, Plaintiff found that he had been misled by NVIDIA when he was playing a popular video game, which required that his GTX 970 use more than 3.5GB of VRAM. As his card accessed the final 0.5GB pool of VRAM, which could only operate at a substantially slower clock speed than the 3.5GB pool, the graphical experience in the game he was playing began to sputter, chop, and distort. Plaintiff was looking forward to utilizing what he thought was the full potential of the card, which as it turns out, was never actually possible.

28. Plaintiff was surprised to discover that even though NVIDIA advertised that the GTX 970 was capable of utilizing a single 4GB pool of VRAM at a speed of 224GB/s, possessed 64 ROP, 2048KB of L2 cache, and performing flawlessly in 4K resolution, this was not true. In disbelief that NVIDIA would lie to consumers like himself and others in the PC gaming

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<sup>15</sup> <http://www.anandtech.com/show/8568/the-geforce-gtx-970-review-feat-evga> (viewed October 1, 2014).

community, Plaintiff considered that his own computer may have caused the problem. However, after swapping his GTX 970 into another computer, Plaintiff once again experienced the same graphical sputtering, chopping, and distorting when his GTX 970 attempted to access VRAM beyond the initial 3.5GB. Plaintiff now owns a GTX 970 that he must either sell at a loss or use for purposes other than those which he purchased it for. Therefore, Plaintiff has suffered a loss of money or property due to NVIDIA's illegal conduct.

### **CLASS ACTION ALLEGATIONS**

29. Plaintiff brings this class action on behalf of himself and all others similarly situated as members of the following proposed national class and subclass (collectively, the "Class"):

#### **National Class**

All persons residing in the United States who purchased a graphics or video card that contains a GTX 970 GPU at retail and not solely for purposes of resale or distribution since September 2014 (the "Class Period").

#### **North Carolina Sub-Class**

All persons residing in the North Carolina who purchased a graphics or video card that contains a GTX 970 GPU at retail and not solely for purposes of resale or distribution during the Class Period.

Excluded from the Class are:

- a. All judicial officers in the United States and their families through the third degree of relationship;
- b. Defendants and any of their officers, directors and employees and any person or entities who has already settled or otherwise compromised similar claims against the defendant;
- c. Plaintiff's counsel, anyone working at the direction of Plaintiff's counsel, and/or their immediate family members; and
- d. Anyone who has pending against the named defendant on the date of the Court's final certification order any individual action

wherein the recovery sought is based in whole or in part on the type of claims asserted herein.

30. This action is brought and may properly be maintained as a class action pursuant to Federal Rules of Civil Procedure 23(b)(2), 23(b)(3) and (c)(4). This action satisfied the numerosity, commonality, typicality, adequacy, predominance, and superiority requirements of these rules.

31. *Numerosity* – The National Class is so numerous that the individual joinder of all members is impracticable. While the exact number of National Class members is currently unknown and can only be ascertained through appropriate discovery, Plaintiff believes that the National Class includes tens of thousands of individuals and the North Carolina Sub-Class includes thousands of individuals.

32. *Commonality* – Common legal and factual questions exist and predominate over any questions affecting only individual Class members. These common questions, which do not vary among Class members and which may be determined without reference to any Class member's individual circumstances, include but are not limited to:

- a. Whether Defendant's representations of the GTX 970, as set forth above, were false, misleading, or reasonably likely to deceive customers targeted by such statements;
- b. Whether Defendant had adequate substantiation of their claims prior to making them;
- c. Whether Defendant's failure to disclose that the GTX 970 did not perform as advertised and represented was material and would be likely to mislead a reasonable consumer;
- d. Whether the GTX 970 performs as marketed and represented;
- e. Whether Defendant charged a premium price for the GTX 970 devices;
- f. Whether Defendant engaged in unfair, unlawful, and/or deceptive business practices as to the GTX 970 in violation of N.C. Gen. Stat. § 75-1.1;

- g. Whether Defendant represented, through its words or conduct, that the GTX 970 provided performance benefits that it did not actually have in violation of N.C. Gen. Stat. § 75-1.1;
- h. Whether Defendant's conduct alleged herein violated public policy; and
- i. Whether Plaintiff and the Class have been injured by the wrongs complained of herein, and if so, whether Plaintiff and the Class are entitled to injunctive and/or other equitable relief, including restitution, disgorgement, and if so, the nature and amount of such relief.

33. *Typicality* – Plaintiff's claims are typical of the Class members' claims.

Defendant's common course of conduct caused Plaintiff and all Class members the same harm. Likewise, Plaintiff and other Class members can prove the same facts in order to establish the same claims.

34. *Adequacy* – Plaintiff is an adequate Class representative because he is a member of the Class he seeks to represent and his interests do not irreconcilably conflict with other Class members' interests. Plaintiff has retained counsel competent and experienced in consumer protection class actions, and Plaintiff and his counsel intend to prosecute this action vigorously for the Class's benefit. Plaintiff and his counsel will fairly and adequately protect the Class members' interests.

35. The Class may be properly maintained under Rule 23(b)(2). Defendants have acted or refused to act, with respect to some or all issues presented in this Complaint, on grounds generally applicable to the Class, thereby making appropriate final injunctive relief with respect to the Class as a whole.

36. The Class can be properly maintained under Rule 23(b)(3) and (c)(4). A class action is superior to other available methods for the fair and efficient adjudication of this litigation because individual litigation of each Class member's claim is impracticable. Even if each Class member could afford to bring individual actions, the court system could not. It would

be unduly burdensome for thousands of individual cases to proceed. Individual litigation also presents the potential for inconsistent or contradictory judgments, the prospect of a race to the courthouse, and the risk of an inequitable allocation of recovery among those with equally meritorious claims. Individual litigation would increase the expense and delay to all parties and the courts because it requires individual resolution of common legal and factual questions. By contrast, the class action device presents far fewer management difficulties and provides the benefit of a single adjudication, economies of scale, and comprehensive supervision by a single court.

## **COUNT I**

### **Unfair and Deceptive Trade Practices**

(On Behalf of Plaintiff, Individually and on  
Behalf of the North Carolina Sub-Class)

37. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

38. Under N.C. Gen. Stat. § 75-1.1, “unfair or deceptive acts or practices in or affecting commerce, are declared unlawful.”

39. By engaging the above described conduct, NVIDIA violated and continues to violate North Carolina’s Unfair and Deceptive Trade Practices Act by, *inter alia*::

- a. By making false and misleading oral and written statements that had, and have, the capacity, tendency or effect of deceiving or misleading consumers;
- b. By making representations that their products have an approval, characteristic, ingredient, use or benefit which they do not have;
- c. By failing to state material facts, the omission of which deceived or tended to deceive; and

d. Through deception, fraud, misrepresentation and knowing concealment, suppression and omission of material facts with the intent that consumers rely upon the same in connection with the use and continued use of the drugs individually or in combination.

40. All of the advertisements, marketing, statements, and representations made by NVIDIA (and mentioned above and in the attached Exhibits), including the “Reviewer’s Guide,” qualify as an “Advertisement” under the statute.

41. Specifically, NVIDIA’s business practices, in advertising, marketing and selling the GTX 970, in misrepresenting material facts, including that the GTX 970 is capable of it operating with a full 4GB pool of VRAM, 64 ROPs, and 2048KB of L2 cache capacity, constitute multiple, separate violations of N.C. Gen. Stat. § 75-1.1, including:

- a. Falsely representing that the GTX 970 has sponsorship, approval, accessory, characteristic, ingredient, use, benefit, or quantity of an amount of ROPs, L2 cache, and Bandwidth which it does not actually possess;
- b. Falsely representing that the GTX 970 is of a particular standard, quality, grade, style, or model which it is not;
- c. Failing to state material facts of the actual specifications of the GTX 970, and its fragmented chip architecture of two pools of VRAM which operate at drastically different speeds; the failure of which of the deceived or tends to deceive consumers Plaintiff and Class members;
- d. Advertising or offering the GTX 970 for sale without the intent to sell it with the advertised capabilities, performance, specifications, qualities, and characteristics of a 4GB GPU; and
- e. Misrepresenting, and/or knowingly concealing, suppressing, or omitting multiple material facts, including the GTX 970’s actual capabilities, performance, specifications, such as the fragmentation of 0.5GB of the total VRAM, the total number of ROPs and L2 cache, and its ability to perform in 4K, the with the intent that consumers, including Plaintiff and Class members rely on the same in connection with the promotion and sale of the GTX 970.

42. NVIDIA engaged in the above conduct in the course of its business, as set forth herein. By way of statements and advertisements NVIDIA made to Plaintiff and Class members

prior to and at the time of sale regarding the capabilities, performance, specifications, qualities, and characteristics the GTX 970, NVIDIA made false and misleading representations of material fact with the intent that Plaintiff and Class members would rely upon. By not stating or advertising the GTX 970's actual capabilities, performance, specifications, qualities, and characteristics, NVIDIA omitted material facts, which it knew Plaintiff and Class members would otherwise rely.

43. Plaintiff and Class members reasonably relied on these representations to their detriment.

44. It is an industry-wide practice for computer component companies like NVIDIA to give away new or soon to be released products to Professional Product Reviewers (as mentioned above), who in turn review the product. These reviews require the PPR to disseminate all of the information they have been provided by the manufacturer, including specifications, capabilities, and characteristics. This information is often – and in this case was – provided in a “Reviewer’s Guide.”

45. Plaintiff and Class members are aware that companies like NVIDIA engage in these practices and often times subscribe to the videos and articles of these professional reviewers because of their accuracy of information and personality. Plaintiff and Class members believe in good faith that PPRs give true and accurate information as provided to the PPR by a product manufacturer, like NVIDIA.

46. With a wealth of information and simplicity of access available on the Internet, consumers will commonly research a product, especially those that cost over \$300, prior to purchase.

47. Therefore, it was reasonable for Plaintiff and Class members to rely on the statements and representations made by NVIDIA, including, *inter alia*, those found in the “Reviewer’s Guide,” NVIDIA’s own website, and the product packaging. In reasonable reliance upon these representations, Plaintiff and Class members purchased the GTX 970, which did not conform to herein described representations.

48. As a result of NVIDIA’s unlawful conduct, Plaintiff and Class members were injured and suffered damages and are entitled to monetary, injunctive, and other equitable relief as determined by the Court, pursuant to North Carolina law.

## **COUNT II**

### **Violation of Similar Unfair and Deceptive Trade Practices Act**

(On Behalf of Plaintiff, Individually and on  
Behalf of All Other Similarly Situated Under  
Substantially Similar Laws of Certain Other States)

49. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

50. At all relevant times hereto, there was in full force and effect the Unfair Deceptive Trade Practices Act, N.C. Gen. Stat. § 75-1.1. Similar statutes, identical in their material respects, are in effect in many jurisdictions within the United States.<sup>16</sup>

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<sup>16</sup> See e.g., ARIZ. REV. STAT. § 44-1522, *et seq.* (Arizona); ARK. CODE ANN. § 4-88-107, *et seq.* (Arkansas); COLO. REV. STAT. § 6-1-101, *et seq.* (Colorado); CONN. GEN. STAT. § 42-110b, *et seq.* (Connecticut); DEL. CODE ANN. tit. 6, § 2511, *et seq.* (Delaware); D.C. CODE ANN. § 28-3901, *et seq.* (District of Columbia); GA. CODE ANN. §10-1-392, *et seq.* (Georgia); HAW. REV. STAT. § 480, *et seq.* (Hawaii); IDAHO CODE § 48-601, *et seq.* (Idaho); 815 ILL. COMP. STAT. 505/1, *et seq.* (Illinois); IND. CODE ANN. § 24-5-0.5-1, *et seq.* (Indiana); KY. REV. STAT. ANN. § 367.110, *et seq.* (Kentucky); ME. REV. STAT. tit. 5, § 205-A, *et seq.* (Maine); MD. CODE. ANN., COM. LAW § 13-101, *et seq.* (Maryland); MASS. GEN LAWS ch. 93A, §1, *et seq.* (Massachusetts); MICH. COMP. LAWS § 445.901, *et seq.* (Michigan); MINN. STAT. § 8.31, *et seq.* (Minnesota); MO. REV. STAT. § 407.010, *et seq.* (Missouri); NEB. REV. STAT. § 59-1601, *et seq.* (Nebraska); NEV. REV. STAT. 598.0903, *et seq.* (Nevada); N.H. REV. STAT. ANN. § 358-A:1, *et seq.* (New Hampshire); N.M. STAT. ANN. § 57-12-1, *et seq.* (New Mexico); N.Y. GEN. BUS. LAW § 349, *et seq.* (New York); N.C. GEN. STAT. § 75-1.1, *et seq.* (North Carolina); N.D. CENT. CODE § 51-15-01, *et seq.* (North Dakota); OHIO REV. CODE ANN. § 1345.01, *et seq.* (Ohio) OKLA. STAT. tit. 15, § 751, *et seq.* (Oklahoma); OR. REV. STAT. § 646.605, *et seq.* (Oregon); PA. CONS. STAT. § 201-1, *et seq.* (Pennsylvania); R.I. GEN. LAWS § 6-13.1-1, *et seq.* (Rhode Island); S.D. CODIFIED LAWS § 37-24-1, *et seq.*

51. N.C. Gen. Stat. § 75-1.1, and other similar statutes across the United States provides that: “unfair or deceptive acts or practices in or affecting commerce, are declared unlawful.”

52. N.C. Gen. Stat. § 75-1.1, and other similar statutes across the United States make *inter alia* the following conduct unlawful:

- a. Making false and misleading oral and written statements that had, and have, the capacity, tendency or effect of deceiving or misleading consumers;
- b. Making representations that their products have an approval, characteristic, ingredient, use or benefit which they do not have;
- c. Failing to state material facts, the omission of which deceived or tended to deceive; and
- d. Through deception, fraud, misrepresentation and knowing concealment, suppression and omission of material facts with the intent that consumers rely upon the same in connection with the use and continued use of the drugs individually or in combination.

53. NVIDIA’s business practices, in advertising, marketing and selling the GTX 970, in misrepresenting material facts, including that the GTX 970 is capable of operating with a full 4GB pool of VRAM, 64 ROPs, and 2048KB of L2 cache capacity, constitute multiple, separate violations of N.C. Gen. Stat. § 75-1.1, and other similar statutes across the United States, including:

- a. Falsely representing that the GTX 970 has sponsorship, approval, accessory, characteristic, ingredient, use, benefit, or quantity of an amount of ROPs, L2 cache, and Bandwidth which it does not actually possess;
- b. Falsely representing that the GTX 970 is of a particular standard, quality, grade, style, or model which it is not;

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*seq.* (South Dakota); TENN. CODE ANN. § 47-18-101, *et seq.* (Tennessee); TEX. BUS. & COM. CODE ANN. § 17.41, *et seq.* (Texas); UTAH CODE ANN. § 13-11-1, *et seq.* (Utah); VA. CODE ANN. § 59.1-196, *et seq.* (Virginia); WASH. REV. CODE § 19.86.010, *et seq.* (Washington); W. VA. CODE § 46A-6-101, *et seq.* (West Virginia); WIS. STAT. § 100.18, *et seq.* (Wisconsin); WYO. STAT. ANN. § 40-12-101, *et seq.* (Wyoming).

- c. Failing to state material facts of the actual specifications of the GTX 970, and its fragmented chip architecture of two pools of VRAM which operate at drastically different speeds; the failure of which of the deceived or tends to deceive consumers Plaintiff and Class members;
- d. Advertising or offering the GTX 970 for sale without the intent to sell it with the advertised capabilities, performance, specifications, qualities, and characteristics of a 4GB GPU; and
- e. Misrepresenting, and/or knowingly concealing, suppressing, or omitting multiple material facts, including the GTX 970's actual capabilities, performance, specifications, such as the fragmentation of 0.5GB of the total VRAM, the total number of ROPs and L2 cache, and its ability to perform in 4K, the with the intent that consumers, including Plaintiff and Class members rely on the same in connection with the promotion and sale of the GTX 970.

54. NVIDIA engaged in the above conduct in the course of its business, as set forth herein. By way of statements and advertisements NVIDIA made to Plaintiff and Class members prior to and at the time of sale regarding the capabilities, performance, specifications, qualities, and characteristics the GTX 970, NVIDIA made false and misleading representations of material fact with the intent that Plaintiff and Class members would rely upon. By not stating or advertising the GTX 970's actual capabilities, performance, specifications, qualities, and characteristics, NVIDIA omitted material facts, which it knew Plaintiff and Class members would otherwise rely.

55. Plaintiff and Class members reasonably relied on these representations to their detriment.

56. It is an industry-wide practice for computer component companies like NVIDIA to give away new or soon to be released products to Professional Product Reviewers (as mentioned above), who in turn review the product. These reviews require the PPR to disseminate all of the information they have been provided by the manufacturer, including specifications,

capabilities, and characteristics. This information is often – and in this case was – provided in a “Reviewer’s Guide.”

57. Plaintiff and Class members are aware that companies like NVIDIA engage in these practices and often times subscribe to the videos and articles of these professional reviewers because of their accuracy of information and personality. Plaintiff and Class members believe in good faith that PPRs give true and accurate information as provided to the PPR by a product manufacturer, like NVIDIA.

58. With a wealth of information and simplicity of access available on the Internet, consumers will commonly research a product, especially those that cost over \$300, prior to purchase.

59. Therefore, it was reasonable for Plaintiff and Class members to rely on the statements and representations made by NVIDIA, including, *inter alia*, those found in the “Reviewer’s Guide,” NVIDIA’s own website, and the product packaging. In reasonable reliance upon these representations, Plaintiff and Class members purchased the GTX 970, which did not conform to herein described representations.

60. As a result of NVIDIA’s unlawful conduct, Plaintiff and Class members were injured and suffered damages and are entitled to monetary, injunctive, and other equitable relief as determined by the Court, pursuant to North Carolina law, and substantially similar laws enacted in other jurisdictions across the United States.

### **COUNT III**

#### **Fraud**

(On Behalf of Plaintiff, Individually and on Behalf of the  
National Class and the North Carolina Sub-Class)

61. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

62. NVIDIA falsely and fraudulently represented to Plaintiff and Class members, and/or the consuming public in general that the GTX 970 (1) was capable of accessing and utilizing all 4GB of VRAM at a speed of 224GB/s; (2) had 64 ROP; (3) had 2048KB of L2 cache; and (4) was capable of providing Plaintiff and Class members with a flawless 4K resolution performance capabilities and gaming experience.

63. The GTX 970 does not conform to these representations because:

- a. Its VRAM is divided into a 3.5GB pool and a 0.5GB pool which operate at substantially different speeds, rendering the 0.5GB pool useless;
- b. It only has 56 ROP;
- c. It only has 1792KB of L2 cache; and
- d. It is incapable of delivering a 4K resolution gaming experience without sputtering, chopping, and/or distorting.

64. The said representations were material to the transaction in that that a reasonable consumer, such as Plaintiff and Class members, would have considered them important in deciding whether to purchase (or to pay the same price for) the GTX 970.

65. When said representations were made by NVIDIA, upon information and belief, it knew those representations to be false and they willfully, wantonly, and recklessly disregarded whether the representations were true.

66. These representations were made by NVIDIA with the intent of defrauding and deceiving the Plaintiffs and Class Members, all of which evinced recklessness, willfulness, and wantonness.

67. NVIDIA made these representations for the purpose of inducing Plaintiff and Class members to act in reliance upon them.

68. At the time the aforesaid representations were made by NVIDIA, including but not limited to when it distributed the Reviewer's Guides to PPRs, hosted advertisements on its own website and across the Internet, Plaintiff and Class members were unaware of the falsity of said representations and reasonably believed them to be true.

69. In justifiable reliance upon these representations, Plaintiff and Class members purchased the GTX 970 and paid a premium price for it, thereby sustaining injury.

70. NVIDIA knew and was aware, or should have been aware, that the GTX 970's VRAM was divided into a 3.5GB pool and a 0.5GB pool which operated at substantially different speeds.

71. NVIDIA knew and was aware, or should have been aware, that the GTX 970 did not actually have 64 ROP.

72. NVIDIA knew and was aware, or should have been aware, that the GTX 970 did not actually have 2048KB of L2 cache.

73. NVIDIA knew and was aware, or should have been aware, that the GTX 970 was not actually capable of providing Plaintiff and Class members with a 4K gaming experience without exhibiting the aforementioned sputtering, chopping, and/or distorting.

74. NVIDIA acted fraudulently, wantonly, and maliciously to the detriment of the Plaintiffs and Class members when it brought the GTX 970 to the market.

75. By reason of the foregoing, Plaintiffs and the Class Members suffered, and continue to suffer, financial damage and injury.

#### **COUNT IV**

## **Fraudulent Misrepresentation**

(On Behalf of Plaintiff, Individually and on Behalf of  
the National Class and the North Carolina Sub-Class)

76. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

77. NVIDIA falsely and fraudulently represented to Plaintiff, Class members, and/or the consuming public in general that the GTX 970 had performance abilities, specifications, qualities, and characteristics that it did not have.

78. NVIDIA falsely represented to purchasers and consumers, including Plaintiff and Class members that the GTX 970 had (1) a true 4GB of VRAM that was not sectioned into multiple pools of memory operating at different speeds; (2) 64 ROP; (3) 2048KB of L2 cache; and (4) flawless 4K resolution performance capabilities.

79. When these representations were made by NVIDIA, upon information and belief, they knew those representations to be false and they willfully, wantonly, and recklessly disregarded whether the representations were true.

80. These representations were made by NVIDIA with the intent of defrauding and deceiving the Plaintiff and Class members.

81. At the time the aforesaid representations were made by NVIDIA, Plaintiff and Class members were unaware of the falsity of said representations and reasonably believed them to be true.

82. In reliance upon said representations, Plaintiff and Class members purchased GTX 970 GPUs, thereby causing Plaintiff and the Class members to sustain damage and injury because they would not have purchased the GTX 970 if not for NVIDIA's misrepresentations, or would not have paid a premium price for it, and will be injured in the

future by having to purchase another GPU which they otherwise would not have been required to purchase had the GTX 970 actually conformed to NVIDIA misrepresentations.

83. NVIDIA knew and was aware that the GTX 970's VRAM was divided into a 3.5GB pool and a 0.5GB pool which operated at substantially different speeds.

84. NVIDIA knew and was aware that the GTX 970 did not actually have 64 ROP.

85. NVIDIA knew and was aware that the GTX 970 did not actually have 2048KB of L2 cache.

86. NVIDIA knew and was aware that the GTX 970 was not actually capable of providing Plaintiff and Class members with a 4K gaming experience without exhibiting the aforementioned sputtering, chopping, and/or distorting.

87. NVIDIA knew and was aware that Plaintiff and Class members would not have purchased the GTX 970 if not for NVIDIA's misrepresentations, or would not have paid a premium price for it, and will be injured in the future by having to purchase another GPU which they otherwise would not have been required to purchase had the GTX 970 actually conformed to NVIDIA misrepresentations.

88. NVIDIA brought the GTX 970 to the market and acted fraudulently, wantonly, and maliciously to the detriment of the Plaintiff and Class members.

89. By way of the statements NVIDIA made to Plaintiff and Class members prior to and at the time of purchase about the VRAM, ROP, L2 cache, and 4K capabilities, NVIDIA suppressed the truth, thus fraudulently misrepresenting the capabilities, performance, specifications, qualities, and characteristics of the GTX 970.

90. By reason of the foregoing, Plaintiff and the Class members suffered, and continue to suffer, financial damage and injury.

## **COUNT V**

### **Negligent Misrepresentation**

(On Behalf of Plaintiff, Individually and on Behalf of the National Class and the North Carolina Sub-Class)

91. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

92. NVIDIA and Plaintiff had a special relationship giving rise to a duty of care. NVIDIA was in a position to provide guidance to Plaintiffs and Class members and in an advisory capacity as to the capabilities, performance, specifications, qualities, and characteristics of the GTX 970.

93. NVIDIA misrepresented and omitted material facts, including:

- a. That the GTX 970 had a true 4GB of VRAM that operated at 224GB/s, and omitted that it was sectioned into multiple pools of memory operating at substantially different speeds;
- b. That the GTX 970 has 64 ROP;
- c. That the GTX 970 has 2048KB of L2 cache; and
- d. That the GTX 970 was capable of providing Plaintiff and Class members with a flawless 4K resolution performance capabilities and gaming experience.

94. These misrepresentations and/or omissions were false and misleading at the time they were made.

95. NVIDIA intended to supply the misrepresentations and omissions to the Plaintiff and Class members or knew that the recipient intended to supply it to Plaintiffs.

96. NVIDIA negligently and carelessly made the foregoing misrepresentations without a basis and did not possess information on which to accurately base those representations.

97. NVIDIA was aware that it did not possess information on which to accurately base the foregoing representations and concealed from Plaintiff and Class members that there was no reasonable basis for making said representations.

98. When NVIDIA made the foregoing representations, it knew or should have known them to be false.

99. In reasonable reliance upon the foregoing misrepresentations by NVIDIA, Plaintiff and Class members were induced to and did purchase the GTX 970.

100. If Plaintiff and Class members had known of the true facts, they would not have purchased the GTX 970, or would have paid a substantially lower price for it. The reliance on NVIDIA's misrepresentations and omissions was justifiable.

101. As a result of the foregoing negligent misrepresentations by NVIDIA, Plaintiff and Class members suffered and will continue to suffer damages and losses as previously described, rendering NVIDIA liable for said damages in an amount to be determined at trial.

## **COUNT VI**

### **Breach of Express Warranty**

(On Behalf of Plaintiff, Individually and on Behalf of the National Class and the North Carolina Sub-Class)

102. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

103. As set forth above, NVIDIA expressly represented to purchasers and consumers, including Plaintiff and Class members that the GTX 970 had (1) a true 4GB of VRAM that was not sectioned into multiple pools of memory operating at different speeds; (2) 64 ROP; (3) 2048KB of L2 cache; and (4) flawless 4K resolution performance capabilities.

104. NVIDIA expressly represented that the GTX 970 conformed to all of the representations it made concerning the GTX 970, including, *inter alia*, those found in the “Reviewer’s Guide,” NVIDIA’s own website, and the product packaging.

105. Plaintiff and Class members read and understood these representations prior to and at the time of purchase. These herein described representations became part of the basis of the bargain when Plaintiff and Class members purchased the GTX 970.

106. Plaintiff and Class members selected and purchased the GTX 970 over all other brands. Had the NVIDIA not made these representations, Plaintiff and Class members would not have purchased the GTX 970 or would have paid a substantially lower price.

107. NVIDIA breached the express warranty to Plaintiff and Class members by selling the GTX 970 because the product never conformed to the express representations described herein.

108. As a direct and proximate cause of NVIDIA’s breach of express warranty on the GTX 970, Plaintiff and Class members have suffered actual and consequential damages.

## **COUNT VII**

### **Breach of Implied Warranty of Merchantability**

(On Behalf of Plaintiff, Individually and on Behalf of the National Class and the North Carolina Sub-Class)

109. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

110. As set forth above, NVIDIA expressly represented to purchasers and consumers, including Plaintiff and Class members that the GTX 970 had (1) a true 4GB of VRAM that was not sectioned into multiple pools of memory operating at different speeds; (2) 64 ROP; (3) 2048KB of L2 cache; and (4) flawless 4K resolution performance capabilities.

111. Plaintiff and Class members relied on the skill and judgment of NVIDIA in using the GTX 970.

112. The GTX 970 is unfit for its intended use and not merchantable because when the GPU requires more than 3.5GB of VRAM, the slower operating 0.5GB pool of VRAM initiates, and in doing so causes sputtering, chopping, and distorting in a GTX 970 user's experience. Accordingly, the GTX 970 cannot perform for its intended use of a high performance PC gaming graphics card.

113. NVIDIA designed, manufactured, sold, and placed the GTX 970 into the stream of commerce knowing and expecting that the GTX 970 would be used by consumers. NVIDIA knew or should have known that the GTX 970, although advertised as a 4GB GPU, was, at the very most, capable of handling graphical tasks that required no more than 3.5GB of VRAM.

114. NVIDIA was aware of these damages as suffered by Plaintiff and Class members as owners of the GTX 970, as evinced by statements made by its Senior VP of GPU Engineering, Jonah Alben, and its CEO Jen-Hsun Huang, each of which confirmed NVIDIA's understanding of such.

115. NVIDIA failed to provide adequate remedy and caused its implied warranties to fail of their essential purpose, thereby permitting remedy under implied warranties.

116. As a direct and proximate cause of the breach of implied warranties, Plaintiff and Class members have suffered and will continue to suffer loss as alleged herein in an amount to be determined at trial.

**COUNT VIII**  
**Breach of Contract**

(On Behalf of Plaintiff, Individually and on Behalf of  
the National Class and the North Carolina Sub-Class)

117. Plaintiff on behalf of himself and all others similarly situated, adopts and incorporates by reference all foregoing allegations as though fully set forth herein.

118. Plaintiff and Class members entered into a contract with NVIDIA. By purchasing the GTX 970, Plaintiff and Class members accepted NVIDIA's offer to sell the GTX 970 at the agreed upon price. Consideration was exchanged between both parties; NVIDIA received a monetary benefit from the sale of the GTX 970, and Plaintiff and Class members received a GTX 970 which they were led to believe conformed to all of the representations described herein.

119. NVIDIA expressly represented that the GTX 970 conformed to all of the representations it made concerning the GTX 970, including, *inter alia*, those found in the "Reviewer's Guide," NVIDIA's own website, and the product packaging.

120. As set forth above, NVIDIA expressly represented to purchasers and consumers, including Plaintiff and Class members that the GTX 970 had (1) a true 4GB of VRAM that was not sectioned into multiple pools of memory operating at different speeds; (2) 64 ROP; (3) 2048KB of L2 cache; and (4) flawless 4K resolution performance capabilities.

121. Plaintiff and Class members read and understood these representations prior to and at the time of purchase. These herein described representations became part of the basis of the bargain when Plaintiff and Class members purchased the GTX 970.

122. NVIDIA breached the contract between it and Plaintiff and Class members because the goods it delivered (the GTX 970) did not conform to the express representations made prior to and at the time of purchase, which were part of the basis of the bargain.

123. As a direct and proximate cause of NVIDIA's breach of contract, Plaintiff and Class members have suffered actual and consequential damages.

## **PRAYER FOR RELIEF**

Plaintiff, on behalf of himself and the Class, pray for a judgment against the Defendant as follows:

- a. An Order certifying the proposed Class under Rule 23 of the Federal Rules of Civil Procedure and appointing Plaintiff and his counsel to represent the Class;
- b. An Order awarding declaratory and injunctive relief as permitted by law or equity, including enjoining Defendant from continuing their unlawful practices as set forth herein;
- c. A judgment awarding Plaintiff and the Class disgorgement and restitution in an amount according to proofs at trial;
- d. An Order that Defendant engaged in a corrective advertising or full refund campaign;
- e. An Order awarding attorneys' fees and costs incurred in prosecuting this action;
- f. An Order awarding pre-judgment and post-judgment interest; and
- g. All other relief that the Court deems necessary, just and proper.

## **JURY TRIAL DEMAND**

Plaintiffs demand a jury trial on all claims so triable.

Dated: March 11, 2015

Respectfully submitted,

*/s/ Scott C. Harris*  
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